

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An endoscopic imaging system comprising:

an endoscope having an insertion unit which is insertable into an object, the insertion unit having an illumination optical system for illuminating the object and an objective optical system for forming an optical image of the illuminated object;

an imaging apparatus having an imaging device for picking up the optical image and outputting a signal;

a video processing unit to which the imaging apparatus is detachably connected and which processes the signal to produce a video signal;

a display for displaying images of the object according to the video signal;

a timing signal generation circuit, incorporated in the imaging apparatus, for generating timing signals used to drive the imaging ~~device apparatus, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied timing signals;~~ and

a common phase adjustment circuit for adjusting the phases of the timing signals so as to compensate for a signal delay occurring over a signal transmission line to which the imaging device is interchangeably linked and over which a signal is transmitted.

2. (Currently Amended) An endoscopic imaging system according to claim 1, wherein the phase adjustment circuit ~~permits an operator to manually adjust~~ adjusts the phases of the timing signals so that an output signal of the imaging device to be input to the video processing unit will be in phase with a predetermined timing signal produced in the video processing unit.

3. **(Previously Presented)** An endoscopic imaging system according to claim 1, wherein the video processing unit has a sync signal generation circuit for outputting sync signals to the timing signal generation circuit.

4. **(Currently Amended)** An endoscopic imaging system according to claim [[1]] 2, wherein the video processing unit the imaging apparatus has a sampling circuit which samples the signal; and

the phase adjustment circuit adjusts the phases of the timing signals according to a sampling timing of the sampling circuit for sampling an output signal of the imaging device according to timing signals generated by the timing signal generation circuit.

5. **(Currently Amended)** An endoscopic imaging system according to claim [[1]] 4, wherein at least one of the imaging apparatus and the video processing unit further has an analog-to-digital conversion circuit for digitizing an analog output signal of the imaging apparatus according to a timing signal generated by the timing signal generation circuit.

6. **(Canceled)**

7. **(Currently Amended)** An endoscopic imaging system according to claim [[1]] 4, wherein at least one of the imaging apparatus and the video processing unit further has checking terminals used to check phase differences between the timing signals generated by the timing signal generation circuit and an output signal of the imaging device having passed through the signal transmission line.

8. **(Canceled)**

9. **(Currently Amended)** An endoscopic imaging system according to claim [[1]] 4, wherein the phase adjustment circuit adjusts permits an operator to manually adjust the phases

of the timing signals according to a regulated resistance to be produced by by adjusting a resistance of a variable resistor.

10. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the phase adjustment circuit permits an operator to manually adjust adjusts the phases of the timing signals according to a regulated by adjusting an output voltage of an electronic voltage regulator.

11. (Previously Presented) An endoscopic imaging system according to claim 10, wherein the video processing unit has an electronic voltage regulator voltage setter for setting an output voltage of the electronic voltage regulator.

12. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the phase adjustment circuit permits an operator to manually select adjusts the phases of the timing signals by selecting one of a plurality of delay elements connected in tandem so as to adjust the phases of the timing signals.

13. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the phase adjustment circuit permits an operator to manually employ adjusts the phases of the timing signals by employing a delay device for producing a delay, of which the magnitude is varied depending on an applied voltage, so as to adjust the phases of the timing signals.

14. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the endoscope is an optical endoscope having a propagation optical system for propagating the optical image, and the imaging apparatus is a TV camera mounted on the optical endoscope and having the imaging device, which picks up the optical image propagated by the propagation optical system, incorporated therein.

15. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the endoscope is an electronic endoscope having the imaging device located at the position of the image plane of the objective optical system, and the electronic endoscope has the imaging apparatus incorporated therein.

16. (Currently Amended) An endoscopic imaging system according to claim [[1]] 4, wherein the phase adjustment circuit ~~permits an operator to manually adjust~~ adjusts the phases of the timing signals, that is, a horizontal driving signal used to horizontally drive the imaging device and a reset signal used to reset the imaging device ~~according to the sampling timing so that the imaging device will output a signal according to the timing of signal processing performed by the video processing unit.~~

17. (Canceled)

18. (Currently Amended) An endoscopic imaging system comprising:
an optical endoscope having an insertion unit which is insertable into an object, the insertion unit having an illumination optical system for illuminating the object, an objective optical system for forming an optical image of the illuminated object, and a propagation optical system for propagating the optical image;
an imaging apparatus mounted on the optical endoscope and having an imaging device for picking up the optical image of the object propagated by the propagation optical system and outputting a signal;

a video processing unit to which the imaging apparatus is detachably connected and which processes the signal to produce a video signal;

a display means for displaying images of the object according to the video signal;
a timing signal ~~generation~~ generator circuit, incorporated in the imaging apparatus, for generating timing signals used to drive the imaging device, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied timing signals; and

a common phase adjustment circuit for adjusting the phases of the timing signals so as to compensate for a signal delay occurring over a signal transmission line to which the imaging device is interchangeably linked and over which a signal is transmitted.

19. (Canceled)

20. (Previously Presented) An endoscopic imaging system according to claim 19, wherein the connector unit has the timing signal generation circuit and the phase adjustment circuit.

21. (Previously Presented) An endoscopic imaging system according to claim 19, wherein the camera head has the timing signal generation circuit and the phase adjustment circuit.

22. (Currently Amended) An endoscopic imaging system comprising:
an electronic endoscope having an insertion unit which is insertable into an object, the insertion unit having an illumination optical system for illuminating the object, an objective optical system for forming introducing an optical image of the illuminated object, and an imaging device located at the position of the image plane of the objective optical system for picking up the optical image and outputting a signal;

a video processing unit to which the electronic endoscope is detachably connected and which processes the signal to produce a video signal;

a display for displaying images of the object according to the video signal;

a timing signal generation generator circuit, incorporated in the electronic endoscope, for generating timing signals used to drive the imaging device, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied timing signals; and

a common phase adjustment circuit for adjusting the phases of the timing signals so as to compensate for a signal delay occurring over a signal transmission line to which the imaging device is interchangeably linked and over which a signal is transmitted.

23. (Previously Presented) An endoscopic imaging system according to claim 22, wherein the electronic endoscope has an operation unit, which is held by an operator, formed at the rear end of the insertion unit, and has the timing signal generation circuit and the phase adjustment circuit incorporated in the operation unit.

24. (Previously Presented) An endoscopic imaging system according to claim 22, wherein the electronic endoscope has a light source connector unit which is removably coupled to a light source apparatus for generating illumination light, and has the timing signal generation circuit and the phase adjustment circuit incorporated in the light source connector unit.

25. (Previously Presented) An endoscopic imaging system according to claim 22, wherein the electronic endoscope has a signal connector unit which is removably coupled to the video processing unit, and has the timing signal generation circuit and the phase adjustment circuit incorporated in the signal connector unit.

26. (Currently Amended) An endoscope system comprising:
first and second endoscopes each having an insertion unit which is insertable into an object, each insertion unit having an illumination optical system for illuminating the object and an objective optical system for introducing forming an optical image of the illuminated object;
first and second imaging apparatuses having first and second imaging devices for picking up optical images produced by the first and second endoscopes, respectively, and outputting first and second signals, respectively;
a video processing unit to which the first and second imaging apparatuses are selectively detachably connected and which processes the first and second signals to produce a video signal;

a display means for displaying images of the object according to the video signal; first and second timing signal ~~generator~~ generator circuits, respectively incorporated in the first and second imaging apparatuses, for generating timing signals used to drive the imaging devices, the timing signals being supplied to the imaging device, the imaging device being driven based on the supplied timing signals; and

first and second phase adjustment circuits for adjusting the phases of the timing signals so as to compensate for signal delays occurring over first and second signal transmission lines to which the first and second imaging ~~device are~~ devices are interchangeably linked and over which a signal is transmitted.

27. (Previously Presented) An endoscope system according to claim 26, wherein the first and second imaging apparatuses have the first and second signal transmission lines of mutually different lengths extended therefrom.

28. (Previously Presented) An endoscopic imaging system according to claim 26, wherein the first and second imaging apparatuses have the first and second imaging devices that offer mutually different numbers of pixels.

29. (Previously Presented) An endoscopic imaging system according to claim 26, wherein the first and second imaging apparatuses have the first and second timing signal generation circuits and the first and second phase adjustment circuits located at mutually different positions on the first and second signal transmission lines linking the first and second imaging devices and the video processing unit.

30. (Currently Amended) An endoscope system comprising:
an endoscope having an insertion unit which is insertable into an object, the insertion unit having an illumination optical system for illuminating the object and an objective optical system for forming an optical image of the illuminated object;

an imaging device for picking up the optical image and outputting a signal to a video processing unit which processes the signal in order to pick up the optical image obtained by the endoscope and output a video signal;

a timing signal generator circuit for generating timing signals used to drive the imaging device, the timing signals being supplied to the imaging device; and

a common phase adjustment circuit for adjusting the phases of the timing signals so as to compensate for a signal delay occurring over a signal transmission line to which the imaging device is interchangeably linked and over which a signal is transmitted.

31. (Previously Presented) An endoscope system according to claim 30, wherein the endoscope is an electronic endoscope in which the imaging device is provided in the insertion unit and which includes a connector unit that is detachably coupled to the video processing unit, and

the imaging device is electrically connected to the video processing unit by having the endoscope connected to the video signal processing unit.

32. (Previously Presented) An endoscope system according to claim 31, wherein at least one of the timing signal generator circuit and the phase adjustment circuit is provided in the endoscope.

33. (Currently Amended) An endoscope system according to claim 32, wherein the phase adjustment circuit adjusts the phase of the timing signal [[for]] according to the timing of a sampling signal which samples signals from the imaging device.

34. (Previously Presented) An endoscope system according to claim 30, wherein the endoscope is an optical endoscope which further comprises a propagation optical system for propagating the optical image,

the imaging device is provided in an imaging apparatus which picks up the optical image propagated by the propagation optical system and which includes a connector unit that is detachably coupled to the video processing unit, and

the imaging device is electrically connected to the video processing unit by having the imaging apparatus connected to the video processing unit.

35. (Previously Presented) An endoscope system according to claim 34, wherein at least one of the timing signal generator circuit and the phase adjustment circuit is provided in the imaging apparatus.

36. (Currently Amended) An endoscope system according to claim 35, wherein the phase adjustment circuit adjusts the phase of the timing signal [[for]] according to the timing of a sampling signal which samples signals from the imaging device.